

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-27. (Canceled)

28. (Currently Amended) A method for treating a contaminated gas stream, the gas stream comprising one or more contaminants, comprising:

transporting a particulate unmilled sorbent material from a remote location to a utility plant site;

combusting coal to produce a contaminated gas stream;

milling the unmilled particulate sorbent material to produce a plurality of milled sorbent particles, the unmilled particulate sorbent material having a first size distribution and the milled sorbent particles having a second size distribution, wherein the second size distribution is smaller than the first size distribution, wherein the second size distribution has a P₉₀ size ranging from about 0.5 to about 25 microns, and wherein the comminuting step occurs on-site with the plant in which the coal is combusted; and

thereafter introducing the comminuted sorbent particles into the gas stream to remove the one or more contaminants.

29. (Previously Presented) The method of claim 28, wherein the milled sorbent particles are introduced directly into the gas stream after the milling step.

30. (Previously Presented) The method of claim 28, wherein the milling step is performed by a jet mill.

31. (Previously Presented) The method of claim 28, wherein the milled sorbent particles are free of intermediate storage after the milling step.

32. (Previously Presented) The method of claim 28, wherein the one or more contaminants comprise an air toxic and wherein the time between the completion of the milling step to the introducing step is no more than about 30 seconds.

33. (Previously Presented) The method of claim 32, wherein sorbent material is activated carbon and wherein the air toxic is at least one of nickel, arsenic, chromium, mercury, selenium, lead, a halogen, and a halide.

34. (Currently Amended) The method of claim 28, wherein the first size distribution has a P_{90} size ranging from about 10 microns to about 1 millimeter ~~and the second size distribution has a P_{90} size ranging from about 0.5 to about 25 microns.~~

35. (Previously Presented) The method of claim 28, wherein, in the milling step, the size reduction factor ranges from about 5 to about 200.

36. (Previously Presented) The method of claim 28, wherein the milling step comprises:

entraining the particulate unmilled sorbent in a high velocity gas stream; and
impacting the particulate unmilled sorbent at the velocity of the gas stream against at least one of another particle and a stationary comminution surface to effect size reduction.

37. (Currently Amended) A method for treating a contaminated gas stream, the gas stream comprising one or more contaminants, comprising:

transporting a particulate unmilled sorbent material from a remote location to a utility plant site;

combusting coal to produce a contaminated gas stream;

milling the unmilled particulate sorbent material to produce a plurality of milled sorbent particles, the unmilled particulate sorbent material having a first size distribution and the milled sorbent particles having a second size distribution, wherein the second size distribution is smaller than the first size distribution, wherein the second size distribution has a P_{90} size ranging from about 0.5 to about 25 microns, and wherein the comminuting step occurs on-site with the plant in which the coal is combusted; and

introducing the comminuted sorbent particles into the gas stream to remove the one or more contaminants.

38. (Previously Presented) The method of claim 37, wherein the milled sorbent particles are introduced directly into the gas stream after the milling step.

39. (Previously Presented) The method of claim 37, wherein the milling step is performed by a jet mill.

40. (Previously Presented) The method of claim 37, wherein the milled sorbent particles are free of intermediate storage after the milling step.

41. (Previously Presented) The method of claim 37, wherein the one or more contaminants comprise an air toxic and wherein the time between the completion of the milling step to the introducing step is no more than about 30 seconds.

42. (Previously Presented) The method of claim 41, wherein sorbent material is activated carbon and wherein the air toxic is at least one of nickel, arsenic, chromium, mercury, selenium, lead, a halogen, and a halide.

43. (Currently Amended) The method of claim 37, wherein the first size distribution has a P_{90} size ranging from about 10 microns to about 1 millimeter ~~and the second size distribution has a P_{90} size ranging from about 0.5 to about 25 microns.~~

44. (Previously Presented) The method of claim 37, wherein, in the milling step, the size reduction factor ranges from about 5 to about 200.

45. (Previously Presented) The method of claim 37, wherein the milling step comprises:

entraining the particulate unmilled sorbent in a high velocity gas stream; and
impacting the particulate unmilled sorbent at the velocity of the gas stream against at least one of another particle and a stationary comminution surface to effect size reduction.

46. (Currently Amended) A method for treating a contaminated gas stream, the gas stream comprising one or more contaminants, comprising:

transporting a particulate unmilled sorbent material from a remote location to a utility plant site;

providing a contaminated gas stream from combustion of coal;

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milling the unmilled particulate sorbent material to produce a plurality of milled sorbent particles, the unmilled particulate sorbent material having a first size distribution and the milled sorbent particles having a second size distribution, wherein the second size distribution is smaller than the first size distribution, wherein the second size distribution has a P_{90} size ranging from about 0.5 to about 25 microns, and wherein the comminuting step occurs on-site with the plant in which the coal is combusted; and

introducing the comminuted sorbent particles into the gas stream to remove the one or more contaminants.

47. (Previously Presented) The method of claim 46, wherein the milled sorbent particles are introduced directly into the gas stream after the milling step.

48. (Previously Presented) The method of claim 46, wherein the milling step is performed by a jet mill.

49. (Previously Presented) The method of claim 46, wherein the milled sorbent particles are free of intermediate storage after the milling step.

50. (Previously Presented) The method of claim 46, wherein the one or more contaminants comprise an air toxic and wherein the time between the completion of the milling step to the introducing step is no more than about 30 seconds.

51. (Previously Presented) The method of claim 50, wherein sorbent material is activated carbon and wherein the air toxic is at least one of nickel, arsenic, chromium, mercury, selenium, lead, a halogen, and a halide.

52. (Currently Amended) The method of claim 46, wherein the first size distribution has a P_{90} size ranging from about 10 microns to about 1 millimeter ~~and the second size distribution has a P_{90} size ranging from about 0.5 to about 25 microns.~~

53. (Previously Presented) The method of claim 46, wherein, in the milling step, the size reduction factor ranges from about 5 to about 200.

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54. (Previously Presented) The method of claim 46, wherein the milling step comprises:

entraining the particulate unmilled sorbent in a high velocity gas stream; and
impacting the particulate unmilled sorbent at the velocity of the gas stream against at least one of another particle and a stationary comminution surface to effect size reduction.